

**Remarks**

**Claims**

Claim 15-17 are pending in the application.

Amendments to claim 15 find support as follows:

- i. lines 6-7: "distributing homogeneously said light ~~for transmission to~~ into optical fiber bundles," Spec., p. 17, line 16;
- ii. lines 7-8: "wherein the light does not pass through a wavelength excluding device prior to being distributed into said optical fiber bundles," Spec., p. 17, lines 24-25 and Figure 4;
- iii. lines 17-18: original claims do not contain the deleted limitation.

No new matter is added by the amendments and entry of the amendments is respectfully requested.

**Claim rejections under 35 U.S.C. §103**

Claims 15-17 were rejected under 35 U.S.C. §103(a) as obvious over King et al. (US2004/0014202), Lee et al. (Biotechniques, 1999, 27:342) and Wittwer et al. (Methods, 2001, 25:430). The rejection is obviated by the amendments.

The examiner stated that King teaches "a plurality of at least 5 optical fiber bundles, each said bundle being arranged for receiving homogeneously distributed light from the lightpipe, and transmitting said light to said fluorescent detector entities," citing p. 4, [0043] of King. The new claim limitation requires that "the light does *not* pass through a wavelength excluding device prior to being distributed into said optical fiber bundles." Notably, this limitation merely adds a physical aspect to the existing limitation that the light is *homogeneously* distributed among the optical fiber bundles. Merriam Webster Dictionary defines "homogeneous" as "of the same or a similar kind or nature." Therefore when the specification states that "emitted light

from the reaction vessel is *homogeneously* distributed using the lightpipe and is transmitted into six glass fiber bundles (p. 17, lines 15-16), that means that each optical fiber bundle receives the same light.

In King, a wavelength excluding device is essential. King teaches some embodiments where a single lightpipe connects the sample with a single detector (e.g., Figs. 5 and 6a). Those embodiments do not have any wavelength excluding devices. For example, Figs. 5 and 6a show a beam of light travelling from the sample (12) to the detector (18) without passing through a wavelength excluding device. On Fig. 6a, a lightpipe (24) is also present between the sample and the detector. However, the claimed invention comprises multiple detector entities. When King uses multiple detector entities, a wavelength excluding device is required. For example, Figure 4 in King shows that the light must pass through a prism (26) before reaching a set of detectors (28) (*see [0035]*). Similarly, Figure 8 in King shows that the light must pass through a diffraction grating (34) before reaching the set of detectors (28) (*see [0040]*). Therefore King does not teach a device comprising a lightpipe and a *plurality* of optical fiber bundles wherein the light does *not* pass through a wavelength excluding device prior to being distributed into said optical fiber bundles.

The newly added limitation also distinguishes the claimed invention from the secondary references, Wittwer and Lee. Lee does not teach specifics of a detection unit with a lightpipe, fiber bundles and multiple detector entities. Wittwer however, teaches a device with multiple detector entities (Fig. 3). The device has a set of four dichroic mirrors as wavelength excluding devices. Therefore Wittwer does not fill the gap in King with respect to omitting the wavelength excluding devices.

Notably, the newly added limitation renders claims nonobvious. MPEP 2144.04(II)(B) states that “omission of an element and retention of its function is an indicia of unobviousness.” The specification expressly states that one of the advantages over the prior art is that “the

number of necessary dichroic mirrors is minimized," see p. 17, lines 24-25. Compared to the cited prior art, the present invention successfully omits costly elements such as dichroic mirrors, diffraction grating or prisms. Yet the device retains the desired ability to detect multiple wavelengths of fluorescent emission. Therefore, according to the MPEP 2144.04(II)(B), the invention is nonobvious.

For the foregoing reasons, a §103(a) rejection over King in combination with Wittwer and Lee may not be applied to the amended claims. Reconsideration and withdrawal of the rejection are respectfully requested.

Conclusion:

In view of the above, Applicants believe that all claims now pending in this application are in condition for allowance. Applicants respectfully request a one-month extension of time to respond to the Office Action. The Commissioner is hereby authorized to charge the fee under 37 CFR § 1.17(a)(1) and any fee deficiency or credit any overpayment to Deposit account No. 50-0812.

If the Examiner believes that a telephone conference would expedite prosecution of this application, please call the undersigned at the number below.

Respectfully submitted,

  
Olga Kay (Reg. No. 57,459)

Date: August 30, 2010  
**Roche Molecular Systems, Inc.**  
4300 Hacienda Drive  
Pleasanton, CA 94588  
Tel: (925) 730-8567  
Fax: (925) 225-1128